

580J* (D,F)**
SINGLE PACKAGE ROOFTOP
GAS HEATING/ELECTRIC COOLING UNIT
TWO STAGE COOLING CAPACITY CONTROL WITH NOVATION™ COIL
SIZES 08, 12, 14 WITH PURON® (R-410A) REFRIGERANT



Submittal Data



This product has been designed and manufactured to meet Energy Star® criteria for energy efficiency. However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow all manufacturer's refrigerant charging and air flow instructions. **Failure to confirm proper charge and air flow may reduce energy efficiency and shorten equipment life.**



DESCRIPTION

580J*** (D,F) units are high-efficiency, single-packaged electric cooling, gas heating units that are pre-wired and pre-charged with Puron® (R-410A) HFC refrigerant. Units utilize an all aluminum flat micro-channel tube with louvered fins condenser coil—NOVATION™. The units are factory tested in both heating and cooling modes. These units meet the ASHRAE 90.1-2007 and Energy Star minimum efficiency levels as well as also meeting 2010 efficiency standards.

STANDARD FEATURES

Base Unit

- Puron (R-410A) HFC refrigerant
- ARI certified efficiency levels up to 11.1 EER
- Rated in accordance with ARI Standard 360
- Designed in accordance with Underwriters' Laboratories Std 1995 and listed by UL and UL, Canada
- Two-stage cooling capacity control
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Standard cooling operating range from 40°F up to 115°F (4°C up to 46°C). Field installable accessory extends the minimum down to -20°F (-29°C).
- Convertible from vertical to horizontal airflow for slab mounting
- Two-inch disposable return air filters
- Thru-the-bottom power and gas entry capability
- Single point gas and electric connections
- 24-volt control circuit protected with resettable circuit breaker and 75-VA transformer
- Belt drive, constant torque, permanently lubricated evaporator-fan motor
- Totally enclosed condenser motors with permanently lubricated bearings
- Low-pressure and high-pressure switches
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- Centralized Terminal Board for component and unit wiring connections

Cabinet

- Access panels with easy grip handles and NO-STRIP screw collar
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet
- Tool-less filter access door

Refrigerant System

- Acutrol™ refrigerant metering system
- Liquid line filter drier
- Scroll compressors with internal line-break overload protection
- Copper tube, aluminum fin evaporator coil
- NOVATION all aluminum condenser coil
- Removable gauge line plugs for reading refrigerant pressure with unit panels in place

Gas Heat

- IGC solid-state gas heat exchanger control for on-board diagnostics, anti-cycle protection, LED error code designation, burner control logic and energy saving indoor fan motor delay
- Gas efficiencies up to 82%
- Designed in accordance with ANSI Z21.47 (design and test standard for gas furnaces) and ANSI Z233.1 (National Fuel Gas code relating to appliance installation requirements)
- Induced draft combustion
- Redundant gas valve, with up to 2 stages of heating
- Flame roll-out safety protector
- Solid-state electronic direct spark ignition system

STANDARD FEATURES (cont.)

Standard Warranty

- 15-year gas heat exchanger - Stainless Steel
- 10-year gas heat exchanger - Aluminized
- 5-year compressor
- 3-year NOVATION condenser coil
- 1-year parts

SUBMITTAL DATA

Job Name _____

Architect _____

Engineer _____

Contractor _____

Unit Designation _____

PERFORMANCE DATA

Unit Operating Weight _____ lb

Curb Weight _____ lb

Cooling

Gross Total Capacity: _____ Btuh

at Condenser Air Temperature _____ °F

Gross Sensible Capacity: _____ Btuh

Compressor Power Input: _____ kW

Indoor Entering db _____ °F wb _____ °F

Airflow _____ External Static Pressure _____ in.wg

Indoor Fan Motor Size _____ Hp

Exhaust Fan Motor Size _____ Hp

Heating

Heating Capacity:

Stage 1 _____ Btuh

Stage 2 _____ Btuh

Heating Capacity Total _____ Btuh

Stage 1 _____ kW

Stage 2 _____ kW

Heating Capacity Total _____ kW

ELECTRICAL DATA

Power Supply to Unit _____ Volts _____ Phase _____ Hz

Minimum Circuit Amps _____ Maximum Overcurrent Protection _____

OPTIONS AND ACCESSORIES

FACTORY-INSTALLED OPTIONS (FIOPs)

- ☐ Open protocol RTU-MP controller communicates to LON, MODBUS, BACNET and Johnson N2 protocols.
- ☐ Through the base connectors for gas and electric conduit/piping
- ☐ Stainless steel gas heat exchanger (includes tubes, vestibule plate and collector box)
- ☐ Economizer with dry bulb sensing and barometric relief
- ☐ Economizer with enthalpy sensing and barometric relief
- ☐ 2 position motorized outdoor air damper
- ☐ Non-fused disconnect
- ☐ Powered 115-volt convenience outlet
- ☐ Non-powered 115-volt convenience outlet
- ☐ High static evaporator fan motor
- ☐ Return Air smoke detector
- ☐ Supply Air smoke detector
- ☐ CO₂ sensor
- ☐ Condenser hail guard - louvered style

OPTIONAL WARRANTIES

- ☐ Complete Unit Parts only up to 5 years
 - ☐ Complete Unit Parts and Labor up to 5 years
- Many other optional warranties are available.
See the *Commercial Start-Up and Optional Extended Warranty Price* price pages for further information.

FIELD INSTALLED ACCESSORIES

- ☐ EconomiSer™ IV-electromechanical, gear driven with Belimo actuator (2-10v DC signal) and controller
- ☐ EconomiSer™ 2-compatible with DDC controls; gear driven with Belimo actuator (4-20mA) signal and no controller
- ☐ Power exhaust
- ☐ Two-position motorized outdoor air damper
- ☐ Manual outdoor air damper 25%
- ☐ Manual outdoor air damper 50%
- ☐ Roofcurb - 14 inch (356mm) tall
- ☐ Roofcurb - 24 inch (610mm) tall
- ☐ Thru-the-bottom connections-electrical only
- ☐ Thru-the-bottom connections-electrical and gas
- ☐ Condenser hail guard - louvered style
- ☐ Flue shield
- ☐ Flue discharge deflector
- ☐ Liquid propane (LP) conversion kit
- ☐ High altitude conversion kit
- ☐ Phase monitor (loss of phase/phase reversal)
- ☐ Winter start kit, down to 25°F (-4°C)
- ☐ Low ambient head pressure controller, down to 0°F (-18°C)
- ☐ Low ambient head pressure controller, down to -20°F (-29°C)
- ☐ Time Guard II compressor anti-cycle protection

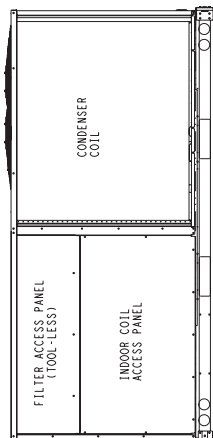
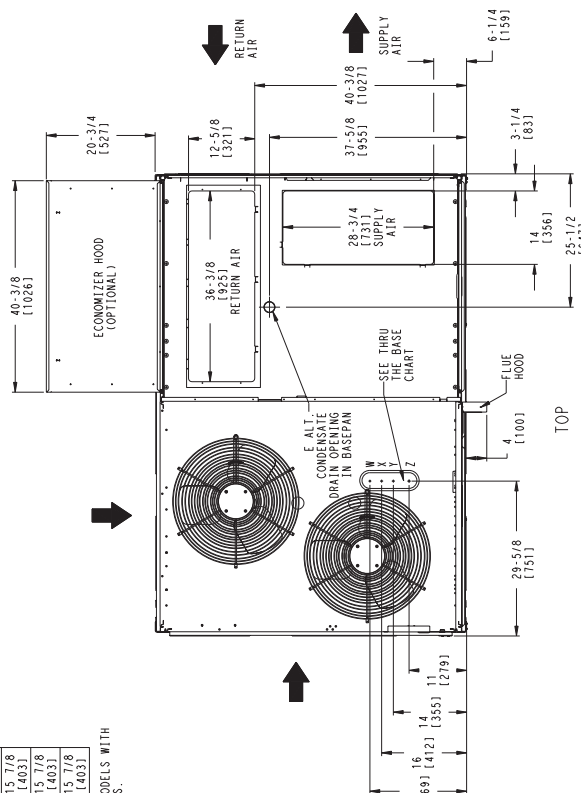
Economizer Sensors

- ☐ Single Dry bulb control
- ☐ Differential Dry bulb control
- ☐ Single enthalpy control
- ☐ Differential enthalpy control
- ☐ CO₂ - wall mounted
- ☐ CO₂ - duct mounted
- ☐ CO₂ - unit mounted

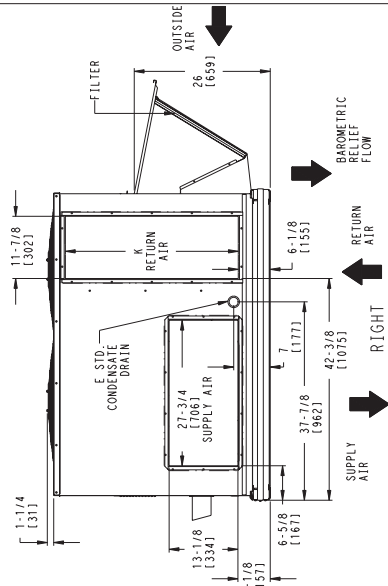
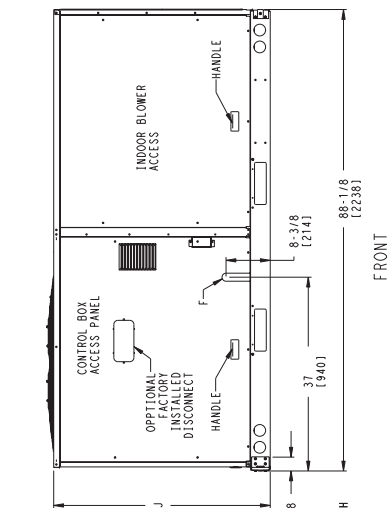
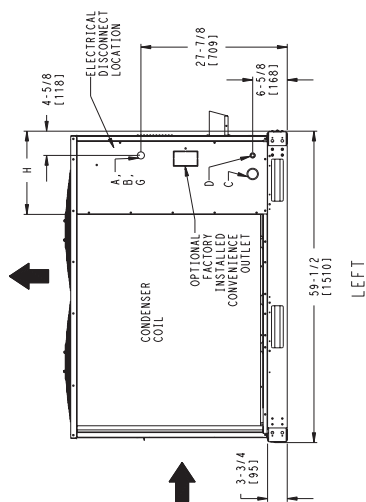


UNIT	J	K	H
580J-08A	41 1/4 [1048]	33 [658]	15 7/8 [403]
580J-09A	49 3/8 [1253]	37 1/4 [946]	23 7/8 [609]
580J-12A	49 3/8 [1253]	37 1/4 [946]	15 7/8 [403]
580J-08D	41 1/4 [1048]	33 [658]	15 7/8 [403]
580J-12D	49 3/8 [1253]	37 1/4 [946]	15 7/8 [403]

• - FOR TWO STAGE COOLING MODELS WITH
NOVATION CONDENSER COILS.



TURN-THRU BASE CHART THESE HOLES REQUIRED FOR USE CIRIPW002A01, 0040A1				
	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)	
W	1/2"	ACC.	7/8" (22.2)	
X	1/2"	24V	7/8" (22.2)	
Y	1 1/4" (1002.004)	POWER	1 3/4" (44.4)	
Z, a, *	(0004) 3/4" FPT	GAS	1 5/8" (41.3)	
	FOR "THRU-THE-BASE" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED FOR HEAT SILE 12SK BTU - A FIELD SUPPLIED 1/2" ADAPTER IS REQUIRED BETWEEN BASE PAN FITTING AND GAS VALVE.			
**	(002) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.			



SHEET	DATE	SUPERSEDES	REV
1 OF 2	10/21/08	09-29-08	5.0

C08500

CERTIFIED DIMENSION 580J*08, 12D

UNITED TECHNOLOGIES SYSTEMS, INC.

CARRIER

P.O. BOX 4898

ROSELAND, NJ 07068-4898

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UNIT	STD. UNIT WEIGHT	CORNER WEIGHT (A)	CORNER WEIGHT (B)	CORNER WEIGHT (C)	CORNER WEIGHT (D)	C.G.												
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z							
580J-08A	810	367	171	78	164	74	233	106	242	110	41	7/8 (1064)	33	7/8 (860)	20	1/4 (514)		
580J-09A	910	413	193	88	181	82	260	118	276	125	41	3/8 (1051)	22	7/8 (581)	22	7/8 (581)		
580J-12A	965	438	207	94	204	93	275	125	279	127	42	3/8 (1076)	24	1/8 (613)	24	1/8 (613)		
580J-08D	860	390	153	69	3	147	66	6	273	124	284	129	42	3/4 (1088)	37	1/2 (954)	20	1/8 (512)
580J-12D	940	426	196	88	9	190	86	2	271	123	279	127	42	(1067)	33	7/8 (862)	20	1/4 (513)

CORNER A

CORNER B

CORNER C

CORNER D

Y

X

Z

SCALE 1:8

TOP

FRONT

580J 08-12 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT

48TW500989

5.0

SHEET 2 OF 2

DATE 10/21/08

SUPERCROSS 09-29-08

REV

C08501

580J*** (D,F)

CERTIFIED DIMENSION 580J*14D

3. DIRECTION OF AIR FLOW

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ACCEPTANCE OF CONTRACT.

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE GRIFFIN® 0201, 040401				
	THREADED CONDUIT SIZE	WIRE SIZE	REQ'D HOLE SIZE (MAX.)	
W	1/2"	ACC.	1/8" (122.2)	
X	1/2"		3/8" (122.2)	
Y	1/4" (1002.004)	POWER	1/4" (44.4)	
Z*	(004) 3/4" FPT	GAS	1/8" (41.3)	
	(002) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.			



C08502

CERTIFIED DIMENSION 580J*14D

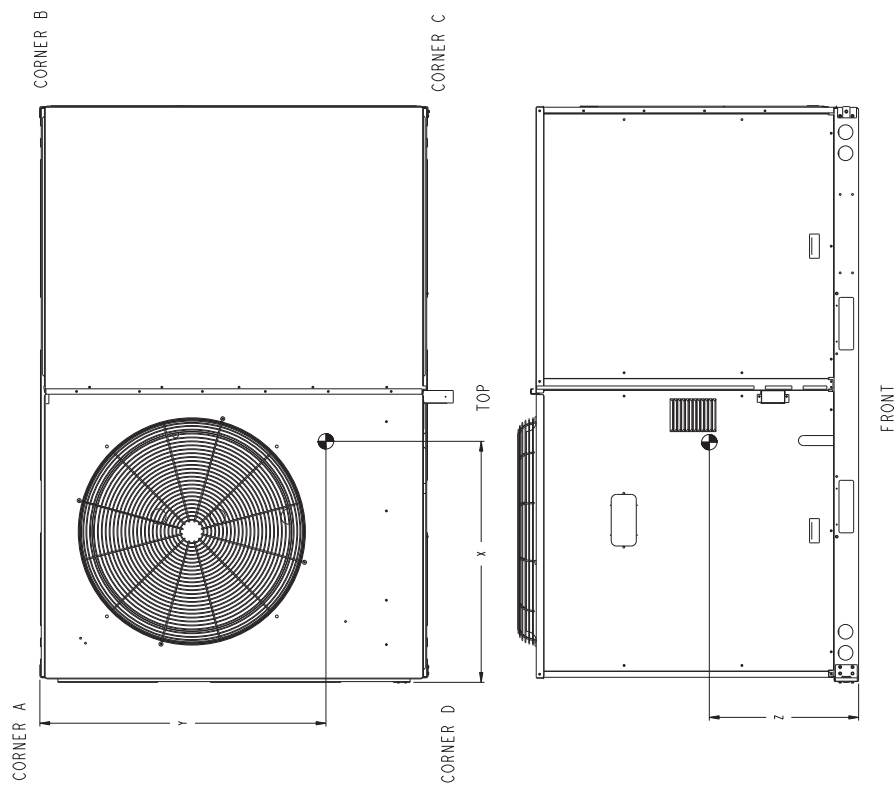
UNIT	STD. UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)			C. G.				
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z			
580J-140	1116	506	297	135	157	71	229	104	434	197	29	1/2 (749)	34	1/4 (870)	20	1/4 (514)



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SYRACUSE, NY
13221

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SHEET	DATE	SUPERCIDES	REV
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C08503

580J*** (D,F)

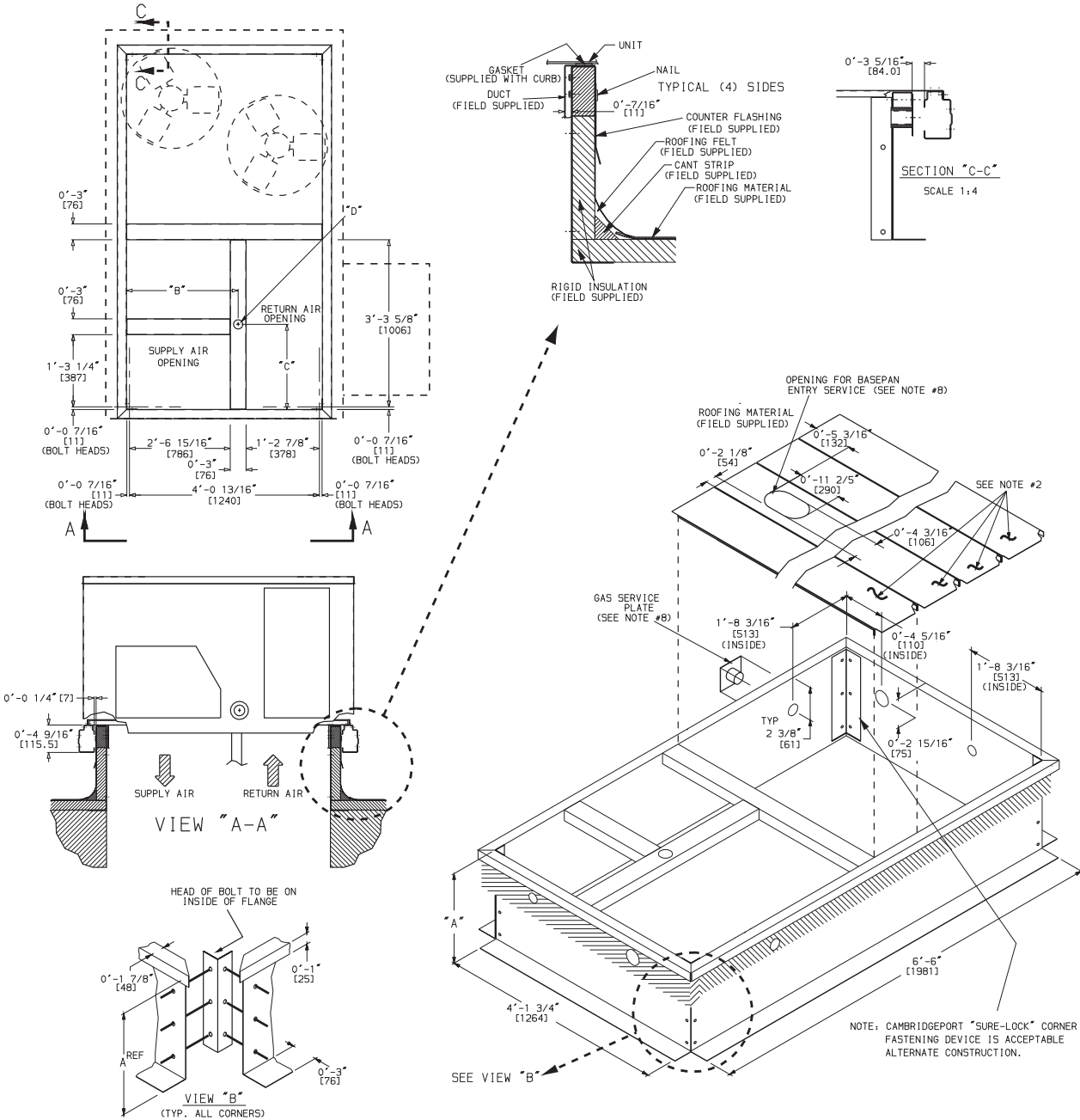
ROOF CURB DETAILS

ROOFCURB ACCESSORY	A	UNIT SIZE
CRRFCURB003A01	1'-2" (356)	580J*08, 12, 14(D,F)
CRRFCURB004A01	2'-0" (610)	

NOTES:

1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS: 1" THK. POLYURETHANE FOAM, 1-3/4 # DENSITY.
3. DIMENSIONS IN [] ARE IN MILLIMETERS.
4. ROOFCURB: 16 GAGE STEEL.
5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB)
6. SERVICE CLEARANCE 4" ON EACH SIDE.
7.  DIRECTION OF AIR FLOW.
8. CONNECTOR PACKAGES CRBTMPWR001A01 AND 2A01 ARE FOR THRU-THE-CURB GAS TYPE. PACKAGES CRBTMPWR003A01 AND 4A01 ARE FOR THE THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

CONNECTOR PKG. ACC.	B	C	D ALT DRAIN HOLE	GAS	POWER	CONTROL	ACCESSORY PWR
CRBTMPWR001A01	2'-8 7/16" [827]	1'-10 15/16" [583]	1 3/4" [44.5]	3/4" [19] NPT	3/4" [19] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRBTMPWR002A01					1 1/4" [31.7]		
CRBTMPWR003A01				1/2" [12.7] NPT	3/4" [19] NPT		
CRBTMPWR004A01				3/4" [19] NPT	1 1/4" [31.7]		



C08547